



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,227	04/13/2006	Riki Okamoto	52433/843	6918
26646	7590	06/08/2010	EXAMINER	
KENYON & KENYON LLP			YANG, JIE	
ONE BROADWAY				
NEW YORK, NY 10004				
			ART UNIT	PAPER NUMBER
			1793	
			MAIL DATE	DELIVERY MODE
			06/08/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,227	Applicant(s) OKAMOTO ET AL.	
	Examiner JIE YANG	Art Unit 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,9-11 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9-11 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/3/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 2-8 and 12-17 have been cancelled; claims 1, 9, and 18 have been amended; claims 1, 9-11, and 18 remain for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case, the equation of hole-expandability in the claim 18 is not disclosed by the original specification. Although the Applicant indicates this equation calculated from the data of Fig.8 and table 13-14, but the Applicant does not show this equation is inherently obtained from these data. Actually, the Examiner notes that a different equation may be obtained from the different mathematic model. The Applicant may provide "132 declaration" to show the inherency of the equation from the disclosed data.

Claim Rejections - 35 USC § 103

Art Unit: 1793

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Tsutomu (JP2001-342543 A, thereafter JP'543) in view of Yasuhara et al (US 6,364,968 B1, thereafter US'968).

JP'543 in view of US'968 is applied to claim 1 for the same reason as stated in the previous office action marked 10/13/2009.

Regarding the "consisting essentially of" language in the instant claim, the transitional language "consisting essentially of" is constructed as equivalent to "comprising" See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See MPEP 2111.03. In the instant case, the applicant has not shown that the introduction of the additional

Art Unit: 1793

alloy elements of the cited prior art would materially change the characteristics of applicant's invention.

JP'543 does not specify the amended Al range from 0.08 to 1.5wt% in the instant claim. US'968 teaches a high-strength steel sheet having excellent stretch flangeability with a fine bainite structure and having a similar composition as disclosed in JP'543 (Abstract and claims 1-6 of US'968). US'968 teaches adding not more than 0.15wt%Al in the alloy (abstract and claims 1-6 of US'968), which overlaps the claimed Al range. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adding proper amount of Al in order to improve cleanliness of the steel and forming a finer structure (Col.7, lines 8-17 of US'968).

Regarding the limitation of precipitates of MgO, MgS, and (Nb,Ti)N in the instant claim, JP'543 teaches that steel sheet is characterized by containing between 1.0×10^3 - 1.0×10^7 pieces/mm² of composite precipitates of MgO and (Nb,Ti)N of not smaller than 0.05μm and not larger than 5μm (Claim 2 of JP'543), which overlaps the composite precipitates: 5.0×10^2 - 1.0×10^7 pieces/mm² of MgO, MgS and (Nb,Ti)N of not smaller than 0.05μm and not larger than 3.0μm as recited in the instant claim.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP'543 in view of US'968.

JP'543 is applied on claim 9-11 for the same reason as stated in the previous office action marked 10/13/2009.

Regarding the "consisting essentially of" language in the instant claim 9, the transitional language "consisting essentially of" is constructed as equivalent to "comprising." See, e.g., PPG, 156 F.3d at 1355, 48 USPQ2d at 1355. If an applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention. In re De Lajarte, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See MPEP 2111.03. In the instant case, the applicant has not shown that the introduction of the additional alloy elements of the cited prior art would materially change the characteristics of applicant's invention.

JP'543 does not specify the amended Al range from 0.08 to 1.5wt% in the instant claim 9. US'968 teaches a high-strength steel sheet having excellent stretch flangeability with a fine bainite structure and having a similar composition as disclosed in JP'543 (Abstract and claims 1-6 of US'968). US'968 teaches

Art Unit: 1793

adding not more than 0.15wt%Al in the alloy (abstract and claims 1-6 of US'968), which overlaps the claimed Al range. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adding proper amount of Al in order to improve cleanliness of the steel and forming a finer structure (Col.7, lines 8-17 of US'968).

Regarding the limitation of precipitates of MgO, MgS, and (Nb,Ti)N in the instant claim 9, JP'543 teaches that steel sheet is characterized by containing between 1.0×10^3 - 1.0×10^7 pieces/mm² of composite precipitates of MgO and (Nb,Ti)N of not smaller than 0.05μm and not larger than 5μm (Claim 2 of JP'543), which overlaps the composite precipitates: 5.0×10^2 - 1.0×10^7 pieces/mm² of MgO, MgS and (Nb,Ti)N of not smaller than 0.05μm and not larger than 3.0μm as recited in the instant claim. See MPEP 2144.05 I.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

Art Unit: 1793

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected on the ground of nonstatutory obviousness type double patenting as being unpatentable over claims 1 and 2 of copending application US 2006/0231166 A1.

Although the conflicting claims are not identical, they are not patentable distinct from each other because claims 1 and 2 of US2006/0231166 teach a similar alloy with the major alloy composition overlapping the composition ranges as recited in the instant claims. The Equations <1> to <3> are the same Equations (5)-(7) of the instant claim 1. Claims 1 and 2 of US2006/0231166 teach the steel having strength of at least 980N/mm^2 , which is the same strength range as recited in the instant claim.

Regarding the amended features in the instant claim, claims 1 and 2 of US2006/0231166 teach a similar alloy with the major alloy composition overlapping the composition ranges as recited in the instant claims and 0.003 to 1.5wt%Al taught by claims 1 and 2 of US2006/0231166 overlaps the range of 0.08to 1.5wt%Al as

Art Unit: 1793

recited in the instant claim. Because US2006/0231166 teach a similar alloy (claims 1-2) with similar heat treatment process (claim 6) as recited in the instant invention, the similar precipitates of MgO, MgS, and (Nb,Ti)N as recited in the instant claim would highly expected in the steel sheet of Claims 1 and 2 of US2006/0231166. MPEP 2112.01. Thus, no patentable distinction was found in the instant claim 1 compared with claims 1-2 of US2006/0231166.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

Applicant's arguments filed 4/13/2010 have been fully considered but they are not persuasive. Regarding the arguments related to the amended feature in the instant claims, the Examiner's position is stated as above.

Regarding the Applicant's arguments filed on 4/13/2010 with respect to claims 1 and 9-11, the applicant argues:

1, JP'543 does not teach or suggest steel sheets having a structure of primarily bainite, nor sufficient tensile strength. The cited references, alone or in combination, do not teach or suggest achieving high hole-expandability and/or ductility in bainite steel sheets (refer to the Appendix A).

Art Unit: 1793

2, JP'543 does not teach or suggest the claimed composite precipitates of MgO, MgS, and (Nb, Ti)N, JP'543 does not teach or suggest Al in the amount from 0.08wt% to 1.5wt%. US'968 does not remedy the deficiencies of JP'543.

3, Regarding the rejections for 9-11, JP'543 does not teach or suggest the additional constraints on the amount of the added elements as defined by the recited equations. JP'543 does not teach or suggest Al in the amount from 0.08wt% to 1.5wt%.

In response,

Regarding argument 1), US'968 teaches a high-strength steel sheet having excellent stretch flangeability with a fine bainite structure. The Examiner notes that US'968 teaches the steel with a fine bainite structure having high tensile strength (990-1210MPa) and excellent in hole-expandability (Hole-expanding ratio: 155%-170%) (Refer to Samples No.2-4 and 7 in table 3 and samples No.3, 6, 7, and 13 in table 5 of US'968), which reads the high hole-expandability and/or ductility of bainite steel sheets as recited in the instant claims. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose desired structure, for example primarily bainite according JP'543 in view of US'968 or primarily ferrite and bainite according JP'543 in order to obtain steel sheet with desired properties.

Regarding the arguments 2) and 3), as pointed out in the previous office actions marked 2/6/2008 and 10/13/2009 and rejections for the instant claims, JP'543 in view of US'968 teaches an alloy with all the composition range overlapping the composition ranges as recited in the instant invention, specifically, JP'543 teaches Mg from 0.0005 to 0.01wt% and S less than 0.009, which overlap the Mg: 0.0006 to 0.01wt% and S:

Art Unit: 1793

0.0005 to 0.009wt% as recited in the instant claim. US'968 teaches adding not more than 0.15wt%Al in the alloy (abstract and claims 1-6 of US'968). JP'543 in view of US'968 teaches the similar alloy with the overlapping composition and the similar microstructure for the similar hole-expanding application as recited in the instant invention. Therefore, the Mg sulfides and its refinement effect to (Ti,Nb)N as recited in the instant claim 1 would inherently exist. MPEP 2112 III&IV. As pointed in the rejections for the instant claims 1 and 9, JP'543 teaches that steel sheet is characterized by containing between 1.0×10^3 - 1.0×10^7 pieces/mm² of composite precipitates of MgO and (Nb,Ti)N of not smaller than 0.05 μ m and not larger than 5 μ m (Claim 2 of JP'543), which overlaps the composite precipitates: 5.0×10^2 - 1.0×10^7 pieces/mm² of MgO, MgS and (Nb,Ti)N of not smaller than 0.05 μ m and not larger than 3.0 μ m as recited in the instant claim.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1793

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/ Roy King/
Supervisory Patent Examiner, Art Unit 1793